UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

CITY OF HUNTINGTON, Plaintiff,

v.

AMERISOURCE BERGEN DRUG CORPORATION, et al., Defendants.

Civil Action No. 3:17-cv-01362

CABELL COUNTY COMMISSION, Plaintiff,

v.

AMERISOURCE BERGEN DRUG CORPORATION, et al., Defendants. Consolidated case: Civil Action No. 3:17-cv-01665

PLAINTIFFS' TRIAL MEMORANDUM REGARDING ADMISSIBILITY OF SUMMARIES OF VOLUMINOUS DATA UNDER FED. R. EVID. 1006

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Plaintiffs submit this Trial Memorandum regarding the admissibility of the summaries of voluminous data under Fed. R. Evid. 1006, which this Court has conditionally admitted. For the reasons stated below, the Court's conditional admission of these summaries was correct and should be confirmed through formal admission into evidence.

I. INTRODUCTION

Plaintiffs have sought to introduce charts summarizing data regarding Defendants' distribution of opioids through Plaintiffs' expert, Craig McCann, Ph.D. Dr. McCann is an economist and data computation and analysis expert. In sum, Dr. McCann took the ARCOS data in the raw form in which it was produced by the DEA, added some additional fields to the data to make it more useful including through incorporation of other government data, employed some "quality control" measures as a check to validate the accuracy of the data, 2 removed some irrelevant or obviously

¹ May 12, 2021 T at 126:5-10.

² For example, Dr. McCann performed a correlation coefficient analysis between two data sources reflecting the shipments of opioids from the Distributor Defendants to retail and chain pharmacies in West Virginia: (1) the ARCOS data and (2) the distribution data submitted by the Defendants. May 12, 2021 T. at 120:24-122:24 The correlation coefficient was in excess of .999, reflecting a nearly perfect match between the Defendants own data and that contained within the ARCOS data. *Id.* at 122:12-24; 123:10-16. To the extent that the ARCOS data was missing any data fields, they were added from the Defendants' transactional data into the data set. May 12, 2021 T. at 123:10-124:7.

erroneous transactions³, and made some minor corrections to the data.⁴ The procedures that Dr. McCann utilized are described in detail in his report produced in this case and he was cross examined on these procedures. The Defendants have not challenged the reliability of Dr. McCann's "cleaning up" of the ARCOS data in this case or any other opioid case in which he has been designated as an expert (CT1, New York).

The amount of ARCOS data produced by the DEA is massive. It contains over 500 million records of shipments reflecting transactions involving fourteen different opioid drugs for the years 2006 through 2014 in all fifty states.⁵ Dr. McCann has prepared a number of summaries of the ARCOS data and associated government data sources that are relevant to this case and will assist the Court in its role as factfinder.

The summaries Dr. McCann provided summarize subsets of data from the ARCOS data produced by the DEA, the associated government data, and transaction

³ For example, Dr. McCann removed the less than 1/100th of 1% of fields that were simultaneously completed, a data entry error that was in violation of the standards set out in the ARCOS handbook. May 12, 2021 T. at 106:24-110:09. Dr. McCann also excluded erroneous reverse distributor transactions that appeared to have been typographical errors when comparing the data to other sources during the quality control checks of the produced data. May 12, 2021 T. at 114:7-116:16. Dr. McCann also excluded double reported transactions to avoid double counting. May 12, 2021 T. at 107:11-116:16.

⁴ For example, the "R" and "P" coded data accounts for approximately 6/10ths of 1% of the shipments of data. May 12, 2021 T. at 113:23-114:15. As Dr. McCann testified, many of these R transactions appear to opioids that a pharmacy received at an earlier point in time from a prior distributor and then returned to a subsequent distributor. May 12, 2021 T. at 114:20-115:21. The removal or inclusion of this data does not materially impact the tables showing distributions into Cabell and Huntington, West Virginia: any impact would be *de minimis*. May 12, 2021 T. at 115:22-116:16. Even in the example cited by Defendants of McCloud Family Pharmacy, the data at issue comprised only approximately 2% of the shipments to that pharmacy. May 12, 2021 T. at 119:7-21.

⁵ May 10, 2021 T. at p. 18:5-8; 20: 7-9;

data produced by the Defendants, as set out in **Appendix A**, hereto. These summaries are properly admitted under Fed. R. Evid. 1006 as set forth below.

II. SUMMARIES OF VOLUMINOUS DATA ARE ADMISSIBLE UNDER RULE 1006.

Federal Rule of Evidence 1006 reads as follows (emphasis added):

FRE 1006: The proponent may use a summary, chart, or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court. The proponent must make the originals or duplicates available for examination or copying, or both, by other parties at a reasonable time and place. And the court may order the proponent to produce them in court.

As the Fourth Circuit has observed, this rule "authorizes the admission of charts into evidence that serve as a surrogate for underlying voluminous records that would otherwise be admissible into evidence Stated otherwise, the chart itself is admitted as evidence " *U.S. v. Oloyede*, 933 F.3d 302, 310-11 (4th Cir. 2019) (quoting and citing *U.S. v. Janati*, 374 F.3d 263, 273 (4th Cir. 2004)) (quotations omitted).

As the Advisory Committee Notes to the rule recognize, "[t]he admission of summaries of voluminous books, records, or documents offers the only practicable means of making their contents available to judge and jury." Here the summaries prepared by Dr. McCann meet all the requirements of Rule 1006: they summarize voluminous records that themselves are admissible as evidence, and both the

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⁶ Plaintiffs have made available to the Defendants the underlying data that is the source of the Rule 1006 summaries on numerous occasions first in CT1 and thereafter – including in this case. *See, e.g.*, Dkt. 1008-1.

summaries and the underlying records were made available to the defendants well before trial.

Charts and summaries are frequently used in trials to summarize voluminous data or information. See, e.g., U.S. v. Loayza, 107 F.3d 257, 264 (4th Cir. 1997) ("Summary charts are admissible if they aid the jury in ascertaining the truth"); U.S. v. Moore, 843 Fed. App'x 498, 504 (4th Cir. 2021) (charts and maps summarizing voluminous cell phone data properly admitted); U.S. v. Brown, 820 Fed. App'x 191, 195-96 (4th Cir. 2020) (summaries of "meal count sheets" admissible in suit alleging defendant defrauded government meal program); U.S. v. Porter, 821 F.2d 968, 974-75 (4th Cir. 1987) (no error in admitting chart summarizing telephone records that was based on and fairly represented evidence from which it was prepared); U.S. v. Janati, 274 F.3d 263, 271-73 (4th Cir. 2004) (discussing the difference between summary charts admissible under Rule 1006 and demonstrative exhibits that can be used to assist the jury in understanding evidence, but not admitted in evidence themselves).

In deciding whether to admit summary charts, the "complexity and length of the case as well as the numbers of witnesses and exhibits are considered" and "potential prejudice to a defendant ... may be dispelled by giving the defendant an opportunity to cross-examine the individual who prepared the chart." *U.S. v. Loayza*, 107 F.3d 257, 264 (4th Cir. 1997) (admitting charts summarizing the bank records of the companies that defendants used to perpetuate a fraudulent scheme). The admission of summary charts "will not be overturned on appeal unless [the] decision

is shown to be arbitrary or irrational." *Id.* (citation omitted). *Accord United States v. Lewis*, 13 F. App'x 180, 192 (4th Cir. 2001) ("admission of ... charts" to "summarize extensive financial evidence" was "neither arbitrary nor irrational" and was "permitted expressly under Fed.R.Evid. 1006."). Indeed, "[i]t is hard to imagine an issue on which a trial judge enjoys more discretion than as to whether summary exhibits will be helpful." *United States v. Milkiewicz*, 470 F.3d 390, 398 (1st Cir. 2006) (internal quotation omitted).

There is no question that the ARCOS data produced by the DEA is "voluminous," and it would not be possible to admit the database itself in evidence—it only exists in electronic form. It would not be feasible even to try to print out the database. Defendants have been provided ample opportunity to cross examine the witness who created the charts and have long had access to both the charts and the underlying data. Admission of the charts and summaries of the data that is relevant to this case is the only practicable means of making that critical evidence available to the Court and is well within this Court's discretion. As noted in the Parties' Joint Stipulation on ARCOS data, one of the purposes of the ARCOS data is to "create summary reports showing how many controlled substances were... distributed throughout the United States." The summaries of the ARCOS data and associated government and defendant information serve precisely that purpose for the geographic region relevant to this trial.

 $^{^7}$ See Dkt. 1332, Parties' Joint Stipulation at \P 3.

III. THE DATA SOURCES FROM WHICH THE SUMMARIES AND CHARTS WERE PREPARED ARE ADMISSIBLE.

The Fourth Circuit has made it clear that all of the underlying evidence from which summaries are prepared need not be actually *admitted* in evidence, only that the underlying evidence be *admissible* and the opponent have an opportunity to review the underlying evidence and cross-examine the person who prepared the summaries. *U.S. v. Strissel*, 920 F.2d 1162, 1163-64 (4th Cir. 1990). Since the underlying evidence here consists entirely of public records,⁸ it is admissible.

The Defendants have stated on the record that they do not dispute the admissibility of the underlying ARCOS data or the admissibility of Defendants' own transactional data.

Dr. McCann augmented the data received from the DEA and Defendants by including information from the following governmental data sources:

- The Food and Drug Administration's (FDA) published list of drug labelers to add names to the ARCOS data.¹⁰
- The "morphine milligram conversion factors" (i.e. "MME") published by the Centers for Disease Control and Prevention in order to

⁸ The ARCOS data produced in this case is not *publicly available*, but it is nevertheless a "record of a public office," the federal Drug Enforcement Administration. The other information included by Dr. McCann, as described below, is all publicly available and also constitute records of public offices. Fed. R. Evid. 803(8).

⁹ May 12, 2021 T. at 124:08 - 125:18. *See also* Dkt. 1332, Parties' Joint Stipulation at ¶ 4. (stipulating to the authenticity of the ARCOS data produced by the DEA).

 $^{^{10}}$ See "NDC/NHRIC Labeler Codes," available at https://www.fda.gov/industry/structured-product-labeling-resources/ndcnhric-labeler-codes (accessed on 5/7/21). May 12, 2021 T. at 118:16-22.

standardize the dosage strengths of the various opioids in the ARCOS database.¹¹

- Data published by the federal Centers for Medicare and Medicaid Services regarding the "National Provider Identifiers" which better identifies mail-order pharmacies, long-term care pharmacies, and managed care pharmacies.¹²
- Data published by the United States Census Bureau.

This Court may take judicial notice of these publicly available government data sources and the information therefrom. *U.S. v. Cecil*, 836 F.2d 1431, 1452 (4th Cir. 1988) ("courts may take judicial notice of official governmental reports and statistics" including "official census figures or studies of such official census reports."). This governmental data is also admissible under the public records exception to the hearsay rule. Fed. R. Evid. 803(8)(A)(ii) ("Public records" include a "record or statement of a public office if it sets out . . . a matter observed while under a legal duty to report").

This government data also has "sufficient guarantees of trustworthiness" and is more probative on the point for which it is offered than any other available evidence, such that it falls within the residual hearsay exception under Fed. R. Evid.

¹¹ See National Center for Injury Prevention and Control. CDC compilation of benzodiazepines, muscle relaxants, stimulants, zolpidem, and opioid analgesics with oral morphine milligram equivalent conversion factors, 2018 version. Atlanta, GA: Centers for Disease Control and Prevention; 2018; available at https://www.cdc.gov/drugoverdose/resources/data.html (accessed on 5/7/21).

¹² See "Full Replacement Monthly NPI File," Centers for Medicare and Medicaid Services, November 2018 (current version available at https://download.cms.gov/nppes/NPI_Files.html) (accessed on 5/7/21).

807. See Fed. R. Evid. 807(a)(1-2).¹³ The instant situation is precisely the type of circumstance contemplated by the residual hearsay exception. See Lorraine v. Markel American Ins. Co., 241 F.R.D. 534 at 581 (D. Md. 2007) (to the extent that "summaries of voluminous materials that are introduced to prove the content of the summarized material creates a hearsay problem[,] . . . the residual hearsay rule, Rule 807, is an exception that may apply to overcome this problem.") (citing Paul R. Rice, Electronic Evidence: Law and Practice (ABA Publ. 2005) at 197-98); see generally United States v. Slatten, 865 F.3d 767, 806–07 (D.C. Cir. 2017) ("The residual hearsay exception was designed to encourage the progressive growth and development of federal evidentiary law by giving courts the flexibility to deal with new evidentiary situations which may not be pigeon-holed elsewhere.") (citing United States v. Mathis, 559 F.2d 294, 299 (5th Cir. 1977)).

In addition to the fact that the publicly available government data is admissible, that data is also appropriate data to summarize in conjunction with the opioid transaction data summarized by Dr. McCann. Indeed, Defendants' expert, Dr. Kevin Murphy, notes that "[c]omparisons across opioids may be based on milligram morphine equivalents ('MMEs')" and uses MME extensively throughout his report. 14

¹³ Defendants were notified of Plaintiffs' intent to rely on this data in this litigation on August 3, 2020 when it was described in detail in Dr. McCann's CT2 report. Fed. R. Evid. 807(b).

¹⁴ See, Expert Report of Keven M. Murphy, PhD, August 27, 2020. See also P-17015 ABDCMDL05954962, December 20, 2016 email from Sharon Hartman FW: MEDD levels (Defendant AmerisourceBergen recognizing that utilization of MME conversion factors "allows comparison" of different opioids and uses MME as a "red flag" when evaluating its customers' dispensing reports).

Dr. McCann processed the ARCOS data produced by the DEA and appended data from other government sources to permit the data to be more easily searched and understood. The data added by Dr. McCann all qualify as official governmental reports and statistics of which this Court may take judicial notice, public records under Rule 803(8), or alternatively fall within the residual exception under Rule 807. Since there is no question about reliability of those sources of information, and since Defendants have stipulated they are not objecting to the admissibility of the ARCOS data produced by the DEA or of their own distribution data, Dr. McCann's processed database is admissible.¹⁵

IV. THE SUMMARY CHARTS ARE ADMISSIBLE UNDER RULE 1006

Because the underlying data sources admissible, so, too, are the charts and tables prepared by Dr. McCann from it, which merely summarize the information contained in the ARCOS database and associated government and defendant data sources.

A. Rule 1006 Summaries May Include Information from Multiple Sources

A Rule 1006 summary may properly include records from multiple sources, including multiple government sources. See, e.g., U.S. v. Brown, 820 Fed. App'x 191, 195-96 (4th Cir. 2020) (summaries of "meal count sheets [and] other documents" admissible under Rule 1006); Sec. Inv. Prot. Corp. v. Bernard L. Madoff Inv. Sec. LLC,

¹⁵ Although the processed database itself is admissible, there is likely no meaningful way for the Court to review it. Plaintiffs have filed on the docket a portable hard drive containing Dr. McCann's processed database. *See* Doc. 1008-1. Should the Court wish to review the database, it is available from the Clerk.

610 B.R. 197, 225-226 (Bankr. S.D.N.Y. 2019) (summary charts of various data sources were admissible 1006 summaries); *PHI*, *Inc. v. Off. & Pro. Emps. Int'l Union*, No. CIV. A. 06-1469, 2009 WL 1530939, at *3 (W.D. La. May 28, 2009) (1006 summary charts could incorporate data from various government agencies, as long as the sources were delineated); *Sec. Inv. Prot. Corp. v. Bernard L. Madoff Inv. Sec. LLC*, 610 B.R. 197, 225-226 (Bankr. S.D.N.Y. 2019) (charts summarizing compilation of various data sources were admissible under 1006)

B. Rule 1006 Summaries May Include Calculations and Assumptions

A witness may appropriately perform calculations or incorporate data in the preparation of a Rule 1006 summary. *United States v. Hemphill*, 514 F.3d 1350, 1359 (D.C. Cir. 2008) (summary chart properly admitted under 1006 where witness appropriately "used his accounting skills" and "perform[ed] some calculations" preparing the charts); *United States v. Evans*, 910 F.2d 790, 799–800 (11th Cir. 1990) (summary admitted under 1006 where government witness appended financial information to the defendant's accounts); *United States v. Jennings*, 724 F.2d 436, 442 (5th Cir. 1984) (summary charts admitted under 1006 included assumptions and extrapolated defendant's reimbursement by assuming a value for average daily expenditure). *Ford Motor Co. v. Auto Supply Co.*, 661 F.2d 1171, 1176 (8th Cir. 1981) (1006 summary of various pieces of financial information, including information derived from financial profitability analysis documents, and information computed from those data sources, was admissible even though not "merely a summary of" a

set of a single data source, where the method for creating the summary was fully explained at trial.).

C. Rule 1006 Summaries May Be Prepared by Experts

Particularly where large-scale data is at issue, courts have admitted summaries and charts associated with experts under Rule 1006. See, e.g., Madoff, 610 B.R. at 225-226 (holding summary charts in expert reports summarizing compilation of various data sources and used by expert in his "analysis of complex and voluminous information" were admissible 1006 summaries, noting underlying data was equally available to the defendants); United States v. Pomrenke, 198 F.Supp.3d 648, 708-709 (W.D. Va. 2016) (holding summary exhibits prepared by government tax expert summarizing financial data were admissible 1006 summaries, noting underlying data was available to defendant and defense counsel had "ample opportunity" to cross the expert witness about the summaries); WWP, Inc. v. Wounded Warriors Family Support, Inc., 628 F.3d 1032, 1039-1040 n.7 (8th Cir. 2011) (noting that the mathematical computations of the expert forensic accountant, who "analyz[ed] a substantial amount of financial data,' and applied reliable methods in forming opinions" were admissible under Rule 1006). While expert reports are ordinarily not admitted into evidence, summaries relied upon by experts that comply with Rule 1006 are admissible. See e.g. Democratic Republic of the Congo v. Air Capital Group, LLC, Case No. 12-20607-CIV-Rosenbaum, 2014 WL 11429051, *5 (S.D. Fla. March 19, 2014) (expert's damages chart properly admitted as Rule 1006 summary); Alexie v. U.S., No. 3:05-cv-00297 JWS, 2009 WL 160354 (Jan. 21, 2009) (noting "tables or graphs from an expert's report might be admissible under Fed.R.Evid. 1006").

D. Rule 1006 Summaries May Focus on a Subset of Data

That some of the summary reports summarize only a subset of the data does not preclude their admission. Rather, the Rule 1006 summarize may properly focus on only a subset of the available data, and their completeness and the accuracy of the information on which they are based, goes to weight and not admissibility. See U.S. v. Blackwell, 436 Fed.Appx. 192 (4th Cir. 2011) (it was not error to admit a summary of phone records under 1006, even though it listed "only a fraction of" the phone records and emphasized one person's name, where opponents had the opportunity to challenge the accuracy through cross examination and examine underlying documents); United States v. Hofstetter, No.: 3:15-CR-27-TAV-DCP, 2019 WL 5057176 (E.D. Tenn. Oct. 08, 2019) (the fact that the government created summary of a only subset of certain pain clinic files, instead of all of the records, goes to weight and not admissibility, because Rule 1006 does not mandate "that a summary document must summarize all available data of the same type."); Gill v. Arab Bank, PLC, 893 F. Supp. 2d 523 (E.D.N.Y. 2012) (holding charts were admissible 1006 summaries where they summarized 8% of the transactions, accounting for 75% of the monetary value of the total transactions where underlying data was available to the defendant, noting accuracy of the charts could be decided by the finder of fact); U.S. v. Bray, 139 F.3d 1104, 1112-1113 (6th Cir. 1998) (charts focusing on different time periods, including one that was consistent with the government embezzlement case theory, were admissible under Rule 1006, and the different focuses of the chart went to weight and not admissibility); *U.S. v. Sawyer*, 85 F.3d 713, 730 (1st Cir. 1996) (summary charts were properly admitted under 1006, even though they included only a subset of the data and address only certain time periods, where opposing party had the opportunity through cross examination to put charts into context and address gaps or to introduce its own contrary summary charts, if it chose to do so).

E. Rule 1006 Summaries May Contain Disputed Information

Even where some of the information summarized by the charts is allegedly incorrect, the summaries themselves may still be admissible, provided the opponent can review the underlying evidence and perform cross examination. *United States v. Strissel*, 920 F.2d 1162, 1164 (4th Cir. 1990) (charts appropriately admitted under 1006 over objection that the charts were "based upon ... incorrect information" where the information was "admissible and available to the opponent" for cross examination); *United States v. Hemphill*, 514 F.3d 1350, 1359 (D.C. Cir. 2008) ("Even if the calculations are mistaken, the chart is itself admissible, since admissible evidence may be unpersuasive and a defendant has the opportunity to rebut it.") *Evans*, 910 F.2d at 800 (chart may still be admissible under Rule 1006 where underlying evidence is contradicted by other evidence at trial).

The summary charts prepared by Dr. McCann are therefore properly admissible under Rule 1006.

V. DEFENDANTS WERE GIVEN OPPORTUNITY TO FULLY CROSS-EXAMINE THE PREPARER OF THE SUMMARIES

Each Defendant was given ample opportunity to cross-examine Dr. McCann.

United States v. Pineda, No. 95–5070, 1996 WL 379799, *3, 91 F.3d 136 (4th Cir.

1996) ("because [defendant] had the opportunity to reveal any inaccuracies in the chart by cross-examination of the Government's witness, the district court properly exercised its discretion by admitting the chart into evidence" under Rule 1006.); *U.S. v. Meyers*, 847 F.2d 1408, 1412 (9th Cir. 1988) (no abuse of discretion in admitting summary where cross-examination permitted regarding chart's discrepancies).

VI. THE SUMMARIES ARE SUPPORTED AND RELIABLE, AND ANY ALLEGED ISSUES GO TO WEIGHT NOT ADMISSIBILITY

Objections that the summaries may contain subsets of data, expert analysis, inaccuracies, ambiguities, misrepresentations or omissions generally go to the weight of the evidence, not its admissibility. See, e.g., U.S. v. Bakker, 925 F.2d 728, 736–37 (4th Cir. 1991) (affirming admission of composite tapes compiling excerpts of a longer broadcast pursuant to Federal Rule of Evidence 1006 and finding that objection that the composite tapes were unrepresentative of the broadcasts went to weight, not admissibility); U.S. v. Bray, 139 F.3d 1104, 1113 (6th Cir. 1998) (rejecting claim that charts were misleading and should have been excluded under Rule 403 because fact that various charts covered different time periods went to weight, not admissibility); U.S. v. Calabran, 836 F.2d 453, 458 (9th Cir. 1988) (same). Thus, for example, that there is one alleged, minor inaccuracy in one month P-44754_00012, a chart summarizing opioid distributions to McCloud Pharmacy, and P-43225_00005, a chart summarizing total and average monthly distributions of oxycodone and hydrocode to select pharmacies, goes to the weight

given that evidence, not its admissibility. See, e.g., U.S. v. Masiarczyk, 1 Fed. Appx. 199, 208-09 (4th Cir. 2001) (alleged inaccuracies in summaries went to weight not admissibility); Iowa Pac. Holdings, LLC v. Nat'lR.R. Passenger Corp., 853 F. Supp. 2d 1094, 1102 (D. Colo., 2012) ("[t]he inaccuracy of a summary under Rule 1006 ... goes to the weight, rather than the admissibility, of the evidence.") (quoting BD ex rel. Jean Doe v. DeBuono, 193 F.R.D. 117, 130 (S.D.N.Y. 2000)).

VII. THE UNDERLYING CONCERNS FOR RESTRICTING THE USE OF SUMMARIES OF EVIDENCE IN SOME CASES ARE NOT PRESENT IN THIS CASE.

One of the common objections to the use of Rule 1006 summaries of voluminous data is that a jury might be mislead by the summary, or that a summary might be prejudicial to the opponent. One objector argued on appeal that summary charts "unduly showed the evidence," an argument which the Fourth Circuit rejected. Loayza, 107 F.3d at 264. Defendants here have suggested that the data contained within the summaries is somehow "cherry picked."

While such objections may be warranted under some circumstances, they have no merit in this case. First, the summaries simply tabulate a standard set of transactional information in the database and depict it in a way that will allow the Court to see that important evidence. Here, uniform data sets are summarized in a consistent manner. For example, some of the charts specifically summarize all

¹⁶ The alleged discrepancy involves 15,200 dosage units of hydrocodone out of total of 2,549,200, which is .006 % of the total hydrocodone shipped to McCloud Pharmacy by AmerisourceBergen from 2006 to 2014. See P-43225_00004. As explained in detail by Dr. McCann, these "R" and "P" transactions were uniformly excluded from the summaries because they did not represent distributions to the dispensers.

shipments of opioids into Cabell and Huntington, or into West Virginia, and include all purchasers. Other charts summarize all distributions of opioids from the Defendants to retail and chain pharmacies (using NPI code).¹⁷ This is not a circumstance where different summary process was applied to different data sets which Plaintiffs then sought to treat in the same manner, or a circumstances in which Plaintiffs are seeking to apply a conclusory label to nonapplicable data. *Cf. U.S. v. Oloyede*, 933 F.3d 302, 310 (4th Cir. 2019) (finding summaries which treated different data sets in different manners, excluded some data sets regarding some defendants but not others, and which implied that all listed transactions related to fraudulent activity when that had not been proven, should be treated as Rule 611(a) summaries instead of Rule 1006 summaries).

Second, since this is a bench trial, any concerns about the factfinder being misled or unduly swayed by the summary charts are unwarranted. Plaintiffs are certain the Court fully comprehends the nature of the summary charts, as described on direct and extensive cross examination, will give the summaries whatever weight they deserve.

Defendants may argue that Dr. McCann's summaries are demonstrative exhibits governed by Rule 611 rather than Rule 1006 summaries. As one court has

¹⁷ See e.g. May 12, 2021 T. at 196:10-21. Distributions to "Closed Door" facilities, such as hospitals and clinics, extended care facilities, and facilities like the Veteran's Administration, were not included the summary. May 12, 2021 T. at 14:24-15:07; 103:5-106:7; 196:10-198:24. The distribution data to retail and chain pharmacies comprises approximately 90% of the opioid distribution data produced by the DEA. May 12, 2021 T. at 104:21-105:05. The use of NPI is clearly indicated on the summary materials. May 12, 2021 T. at 103:24-104:08; 104:21-106:07.

noted, in the context of a bench trial, "this is a distinction without a difference." Minebea v. Pabst, 231 F.R.D. 1, 3 (D.D.C. 2005) ("This is a bench trial, after all, and there is no good reason for the Court not to consider these exhibits as a kind of road map prepared by the expert to assist the Court in evaluating his report and testimony."). Even when a jury serves as a factfinder, it is not error to receive even Rule 611 charts into evidence if the jury is properly instructed. *United States v.* Johnson, 54 F.3d 1150, 1159 (4th Cir. 1995); see also United States v. Bray, 139 F.3d 1104, 1111–12 (6th Cir. 1998) (Rule 611 demonstrative or "pedagogical" summary may be admitted into evidence when summary "is so accurate and reliable a summary illustration or extrapolation of testimonial or other evidence in the case as to reliably assist the factfinder in understanding the evidence, although not within the specific requirements of Rule 1006."). Furthermore, even when a summary exhibit contains some portions which may be inadmissible, in a bench trial it is not error to admit the entire exhibit when the remaining portions of the summary are admissible and may be relevant. White Indus., Inc. v. Cessna Aircraft Co., 611 F. Supp. 1049, 1073 (W.D. Mo. 1985).

Finally, admission of the summaries is important because it will assist the Court in its role as factfinder in this case. The summaries will help the Court understand the nature of the public nuisance Plaintiffs contend exists in their communities and the causes thereof. They will be helpful for use with witnesses during Plaintiffs' case in chief, and they will also be helpful in cross-examination of defense witnesses during their case in chief.

Put simply, whatever concerns might exist in some cases about the use of charts and summaries of voluminous data, those concerns are not present in this case.

CONCLUSION

For the reasons discussed herein, the charts and summaries prepared by Dr. McCann summarizing the voluminous data on opioid transactions contained in the ARCOS database are admissible under Fed. R. Evid. 1006.

Dated: May 13, 2021

THE CITY OF HUNTINGTON

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CERTIFICATE OF SERVICE

I hereby certify that on May 13, 2021, a copy of the foregoing was filed electronically. Notice of this filing will be sent to all parties by operation of the Court's electronic filing system. Parties may access this filing through the Court's system.

s/ Anthony J. Majestro
Anthony J. Majestro (WVSB 5165)

APPENDIX A

- Average per capita dosage units and total dosage units for 14 opioids¹⁸ shipped from all sellers to all dispensers nationally, into West Virginia and into Cabell County and City of Huntington from 2006 through 2014. P-44711_00003.
- Oxycodone and hydrocodone shipped by all sellers to all buyers nationally, shown in MME and weight in milligrams. P-44711 00004 and P-44711 00005.
- Total oxycodone and hydrocodone MME per capita, by State from 1997 through 2019. P-44711_00006.
- Oxycodone and hydrocodone shipped by all sellers to all buyers in West Virginia, shown in MME and weight in milligrams. P-44711_00008 and P-44711_00009.
- A map of zip codes 255 and 257, the three digit zip codes used by the DEA's publicly available Retail Drug Summary Reports. P-44711 00010.
- Oxycodone and hydrocodone shipped by all sellers to all buyers in zip codes 255 and 257, shown in MME and weight in milligrams. P-44711_00011 and P-44711_00012.
- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from all sellers to all dispensers nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711_00015.
- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from all sellers to pharmacies nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711_00016.
- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from all Defendants to all dispensers nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711 00017.
- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from all Defendants to pharmacies nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711_00018.
- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from each of the Defendants to all dispensers nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711_00019; P-44711_00022; P-44711_00025.

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¹⁸ Hydrocodone, oxycodone, morphine, codeine, hydromorphone, fentanyl, oxymorphone, tapentadol, meperidine, dihydrocodeine, levorphanol, opium (powdered), methadone and buprenorphine.

- Average per capita dosage units and total dosage units of oxycodone and hydrocodone shipped from each of the Defendants to pharmacies nationally, in West Virginia and in Cabell County and City of Huntington from 2006 through 2014. P-44711_00020; P-44711_00023; P-44711_00026.
- Total dosage units of oxycodone and hydrocodone shipped from each of the Defendants to retail and chain pharmacies nationally, in West Virginia and in Cabell County and City of Huntington for various time periods. P-44711_00021; P-44711_00024; P-44711_00027.
- Total dosage units of oxycodone and hydrocodone shipped from Defendants to retail and chain pharmacies from 1996 through 2018 by distribution center. P-44711 00028.
- Total dosage units of oxycodone and hydrocodone per capita by distributor shipped to retail and chain pharmacies in Cabell County and City of Huntington from 1996 through 2018. P-44711_00029.
- Total dosage units of oxycodone, hydrocodone, and oxycodone and hydrocodone combined shipped from all sellers, all Defendants combined and each of the Defendants separately to retail and chain pharmacies nationally, in West Virginia and in Cabell County and City of Huntington for various time periods. P-44711_00034.
- Per capita dosage units of oxycodone, hydrocodone, oxycodone and hydrocodone combined, shipped from all sellers, all Defendants combined and each of the Defendants separately to retail and chain pharmacies nationally, in West Virginia and in Cabell County and City of Huntington for various time periods. P-44711_00035.
- Oxycodone and hydrocodone dosage units shipped by each of the Defendants to select pharmacies in Cabell County and City of Huntington and other areas in West Virginia and the surrounding states. P-43225_00001 through P-43225_00018.
- Oxycodone and hydrocodone by dosage unit and MME shipped by all sellers to selected pharmacies in Cabell County and City of Huntington from 2006 through 2014. P-44748_00004; P-44748_00005; P-44711_00044; and P-44711_00045.
- Oxycodone and hydrocodone shipped by all sellers to Family Discount Pharmacy of Stollings Inc from 1996 through 2019. P-44750_00001; P-44750_00002; P-44750_00007; P-44750_00041; P-44750_00044; P-44750_00059
- Oxycodone and hydrocodone shipped by all sellers to Family Discount Pharmacy from 1996 through 2019. P-44751_00001; P-44751_00002; P-44751_00010; P-44751_00054; P-44751_00068; P-44751_00084;
- Oxycodone and hydrocodone shipped by all sellers to CVS Pharmacies from 1996 through 2019. P-44748_00001; P-44748_00002; P-44748_00006; P-44748_00011; P-44748_00013; P-44748_00016; P-44748_00055

- Oxycodone and hydrocodone shipped by all sellers to Rite Aid Pharmacies from 1996 through 2019. P-44757_00001; P-44757_00002; P-44757_00006; P-44757_00007; P-44757_00012; P-44757_00014; P-44757_00017; P-44757_00031; P-44757_00060; P-44757_00072
- Oxycodone and hydrocodone shipped by all sellers to Fruth Pharmacies from 1996 through 2019. P-44752_00001; P-44752_00002; P-44752_00006; P-44752_00007; P-44752_00013; P-44752_00015; P-44752_00018; P-44752_00062; P-44752_00069; P-44752_00075; P-44752_00084
- Oxycodone and hydrocodone shipped by all sellers to Medicine Shoppe Pharmacies from 1996 through 2019. P-44755_00001; P-44755_00002; P-44755_00003; P-44755_00006; P-44755_00013; P-44755_00015; P-44755_00018; P-44755_00034; P-44755_00096; P-44755_00108; P-44755_00124
- Oxycodone and hydrocodone shipped by all sellers to Custom Script Pharmacy from 1996 through 2019. P-44747_00001; P-44747_00002; P-44747_00006; P-44747_00008; P-44747_00014
- Oxycodone and hydrocodone shipped by all sellers to Drug Emporium from 1996 through 2019. P-44749_00001; P-44749_00002; P-44749_00003; P-44749_00006; P-44749_00010; P-44749_00012; P-44749_00015; P-44749_00016; P-44749_00018; P-44749_00034; P-44749_00047; P-44749_00057; P-44749_00063; P-44749_00070
- Oxycodone and hydrocodone shipped by all sellers to McCloud Pharmacy from 1996 through 2019. P-44754_00001; P-44754_00002; P-44754_00003; P-44754_00006; P-44754_00010; P-44754_00012; P-44754_00015; P-44754_00018; P-44754_00046; P- P-44754_00056
- Oxycodone and hydrocodone shipped by all sellers to Safescript Pharmacy from 1996 through 2019. P-44758_00001; P-44758_00002; P-44758_00003; P-44758_00006; P-44758_00010; P-44758_00012; P-44758_00027; P-44758_00030; P-44758_00039; P-44758_00045
- Oxycodone and hydrocodone shipped by all sellers to Hurley Drug Company Inc. Pharmacy from 1996 through 2019. P-44753_00001; P-44753_00002; P-44753_00068; P-44753_00084.
- Oxycodone and hydrocodone shipped by all sellers to Strosnider dba Sav-Rite Pharmacy from 1996 through 2019. P-44759_00001; P-44759_00002; P-44759_00027; P-44759_00034.
- Oxycodone and hydrocodone shipped by all sellers to Aracoma Pharmacy from 1996 through 2019. P-44744_00001; P-44744_00002; P-44744_00008; P-44744_00042; P-44744_00010; P-44744_00036
- Opioid dosage units shipped by McKesson nationally from 2006 through 2014. P-42879_00001.

- Oxycodone & Hydrocodone dosage units shipped by Cardinal Health to all dispensers nationally from 2006 through 2014. P-44318_00001; P-44318_00002; P-44318_00003; P-44318_00004
- Hydrocodone dosage units shipped by Cardinal Health to all dispensers nationally from 2006 through 2014. P-44723_00001 and P-44723_00002.
- Hydrocodone dosage units shipped by McKesson to all dispensers nationally from 2006 through 2014. P-44726_00001 and P-44726_00002.
- Oxycodone dosage units shipped by AmerisourceBergen to all dispensers nationally from 2006 through 2014. P-44731_00001 and P-44731_00002.
- Oxycodone dosage units shipped by McKesson to all dispensers nationally from 2006 through 2014. P-44734_00001 and P-44734_00002.